REMARKS

Claims 1-3, 5-14 and 16-37 are pending in the above-identified application.

Issues under 35 USC 103(a)

Claims 1-3, 5-14 and 16-37 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hebrink '182 (US Publication No. 2001/0019182) taken in view of evidence given by Arends '659 (US Patent 5,360,659) in view of Weber '897 (US Patent 6,025,897).

The above rejection is respect fully traversed based on the following reasons.

Present Invention and Its Advantages

The present invention is directed to a multilayer film formed from alternate thermoplastic layers A and B, wherein these layers have the same basic skeleton. As recited in amended claim 1, the multilayer film is manufactured by using a feedblock which separately includes at least two or more members having a number of microscope slits, wherein the total number of layers A and B is no less than 640. In this regard, note that the feedblock arrangements for Examples 3, 10-18, 22 and 23 as described at pages 88-126 and summarized in Tables 1-7 provide various embodiments of the present invention in the form of multiple layer films having at least 801 layers.

As described at page 55, line 17 to page 56, line 1 of the present specification, the employment of such a feedblock to manufacture the multilayer film of the present invention provides for advantageously reduced amounts of foreign substances resulting from deterioration due to heat, high precision layering even if the number of layers is large, and improved layering precision in the width direction. This film exhibits a reflectance peak before and after heating at 150°C for 30 minutes which differs by no greater than 15%. Also, the difference in reflectance between peaks of reflection in different locations in the width direction is within $\pm$10%. The film of the present invention exhibits advantageous properties. As evidenced by the examples and the comparative test results shown in Tables 1-7 in the present specification, the film embodiments of the present invention (Examples 1-23) exhibit advantageously improved

reflectance, dimensional eveness, scratch resistance and resistance to layer separation properties over Comparative Examples 1-6 which do not include the inventive features.

Submission of Osada Declaration under 37 CFR 1.132

In order to further support the significant distinctions between the present invention and Hebrink '182, submitted with this Response is a Declaration under 37 CFR 1.132 (hereinafter the "Osada Declaration"). The Osada Declaration establishes that by employing a feedblock which separately includes at least two or more members having a number of microscope slits, rather than employing a smaller feedblock in combination with a "multiplier" as disclosed by Hebrink '182, an advantageously improved multilayer film can be obtained which exhibits the above-noted improved properties. Concerning the comparative tests described in the Osada Declaration, it is noted that the feedblock employed in Experiment (1) is actually much closer to the feedblock used in the present invention, in that this feedblock provides 201 layers simultaneously, in contrast to the feedblock of Hebrink '182 which provides only two layers at once. In this regard, Hebrink '182 discloses a first polymer layer that passes through path **42** and a second polymer layer that passes through path **44** which would require that this two-layer structure pass through a multiplier more than eight times ($2^7 < 200 < 2^8$). It is also noted that the "square mixer" described in the Osada Declaration corresponds to the multiplier of Hebrink '182. Consequently, Experiment (1) in the Osada Declaration is actually much closer to the present invention than any of the examples described in Hebrink '182.

The Osada Declaration summarizes the distinction between Experiment (1), i.e. and embodiment consistent with Hebrink '182 but closer to the present invention than any examples in Hebrink '182, and Experiment (2) which is an embodiment of the present invention. As confirmed in the Osada Declaration and as is evident from a review of Table 1 therein, it is clear that the lamination irregularities and reflectance variations in the transverse direction exhibited by the film of Experiment (2) are advantageously superior to that of the film of Experiment (1). Significantly, the fact that the polymer layers in the form of a viscous fluid must pass through a multiplier (or square mixer) increases the polymer flow before casting, resulting in more lamination irregularities. Because the feedblock used to make the film of the present invention

includes at least two or more members having a number of microscopic slits, the length of the polymer flow can be advantageously shortened so as to improve properties including lamination precision of the film. Thus, significantly improved advantageously properties are achieved in accordance with Experiment (2) over that of Experiment (1) so as to establish significant differences over the examples of Hebrink '182 which are even farther removed from that of Experiment (1).

Distinctions over Cited References

Hebrink '182 discloses methods and apparatuses for making multilayer optical films. Hebrink '182 mentions in paragraphs [0138] and [0145] some processing conditions which affect reflectance properties. Hebrink '182 discloses a desire to obtain thickness uniformity in a widthwise direction at paragraph [0077], but fails to specifically identify a method to do so. Hebrink '182 also mentions some examples of thermoplastic layers in paragraphs [0057] and [0058] with reference to uniaxially oriented films. Hebrink '182 discloses in paragraph [0005] that the combination of a feedblock with one or more multipliers results in film that do not have satisfactory uniformity of reflectivity properties. Instead, Hebrink '182 employs the feedblocks described at paragraphs [0022], [0026] and [0071]-[0076] and as shown in Figure 1-3. Note also, that Hebrink '182 distinguishes a "feedblock" **104** from a multiplier **106** as shown in Figure 1 and discussed in paragraph [0022]. Hebrink '182 depicts a feedblock in Figure 3 which does not include two or more members having a number of microscopic slits. Therefore, the feedblock of Hebrink '182 produces an initial polymer product having only two layers which must be cut and stacked by using a multiplier to obtain the final product having multiple layers.

Hebrink '182 fails to disclose the use of a feedblock corresponding to that of the present invention in order to manufacture the described multilayer film. Hebrink '182 fails to disclose or suggest a multilayer film that exhibits a reflectance peak before and after heating at 150°C for 30 minutes which differs by no greater than 15%, as in the present invention. Hebrink '182 further fails to disclose or suggest a difference in reflectance between peaks of reflection in different locations in the width direction that is within ±10%, as n the present invention. Further, the uniaxially oriented thermoplastic films mentioned in Hebrink '182 must shrink in the oriented

direction upon application of heat, such that it is not possible to satisfy the requirement that a reflectance peak differ by no greater than 15% after heating, as in the present invention. Consequently, significant patentable distinctions exist between the present invention and Hebrink '182, such that the above rejections based on this reference must not be maintained.

Further, the Osada Declaration described above provides significant comparative test evidence which establishes that employment of the combination of a smaller feedblock with a multiplier (or square mixture) as in Experiment (1), an embodiment closer to the present invention than described in Hebrink '182, results in disadvantageously inferior lamination irregularities and variations in reflectance in the transverse direction for the film produced thereby. Hebrink '182 simply fails to recognize the advantages associated with employing the feedblock used in making the multilayer film of the present invention which separately includes at least two or more members having a number of microscopic silts to produce a film with no less than 640 layers. Thus, even hypothetically assuming that prima facie evidence has been properly alleged based on Hebrink '182, this evidence of unexpected, advantageous properties provided in the Osada Declaration rebuts such obviousness such that the above rejection based on Hebrink '182 must be withdrawn.

In addition, it is submitted that both Arends '659 and Weber '897 fail to make up for the deficiencies of Hebrink '182, such that even an attempt to combine these references together fails to disclose or suggest the features of the claimed film of the present invention. Thus, the rejection based on Weber '897 and Hebrink '182 must also not be maintained.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned, Andrew D. Meikle, at the telephone number below, in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By_____

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Enclosure: Osada Declaration under 37 CFR 1.132